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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,755	07/15/2003	Ragulan Sinnarajah	030275	8985

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EXAMINER	
MEHRPOUR, NAGHMEH	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,755	SINNARAJAH ET AL.	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-72* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-3, 8, 11-12, 16, 19-20, 26, 33, 38, 44, 47-48, 52, 55-57, 65-66, 67, 70,** are rejected under 35 U.S.C. 102(e) as being anticipated by Heidari (US patent Number 6,711,413).

Regarding claims 1, 11, 19, 37, 47, 55, 65, Heidari teaches method for providing short-slot-cycle paging information to a base station (BS)(col 6 lines 17-28), comprising:

a receiver capable of receiving information from a communication device (CD) (co 8 lines 25-41);

a transmitter capable of transmitting information to the CD (col 8 lines 25-41); and

a processor 86 capable of carrying out a method for providing short-slot-cycle paging (col 7 lines 12-45, col 8 lines 25-42), the method comprising:

indicating to the CD that the BS is capable of short-slot-cycle paging (col 6 lines 17-28, col 8 lines 35-47);

receiving information from the CD, indicating that the CD is also capable for short-slot-cycle paging (col 6 lines 17-38, col 8 lines 35-47); and

paging the CD based on the received information (col 8 lines 25-48).

Regarding claims 2, 12, 20, 33, 38, 48, 56, 66, Heidari inherently teaches a method of claim 1, further including setting a negative slot-cycle-index value for said short-slot-cycle paging (col 9 lines 35-60). A mobile-station-assigned quick paging channel 36 is also shown in the

figure. The quick paging channel (QPCH) 36 assigned to the mobile station is formed of QPCH slots 38. During operation, a particular QPCH slot 38 is also assigned to a mobile station, for the same time period during which a paging channel slot 34 is assigned to the mobile station, again, e.g., during 1.28 second assignation. The QPCH slots 38 are, however, offset from the paging-channel slots 34 by 100 ms offsets. And, two-page indication bits 44 and 46 in the QPCH slot 38 are assigned to each mobile station. The page indication bits are separated by at least 20 ms separations (col 6 lines 17-28). In order to examine the system parameter, and for reduction of the paging separation the slot cycle period from 1.28 seconds, and to achieve the 20 ms separation, the value of slot cycle index has to be negative.

Regarding claims 3, 21, 31, 39, 49, 57, 67, Heidari inherently teaches a wherein the negative slot-cycle-index value includes one of "-1," "-2," "-3," or "-4". Heidari teaches a mobile-station-

assigned quick paging channel 36 is also shown in the figure. The quick paging channel (QPCH) 36 assigned to the mobile station is formed of QPCH slots 38. During operation, a particular QPCH slot 38 is also assigned to a mobile station, for the same time period during which a paging channel slot 34 is assigned to the mobile station, again, e.g., during 1.28 second assignation. The QPCH slots 38 are, however, offset from the paging-channel slots 34 by 100 ms offsets. And, two-page indication bits 44 and 46 in the QPCH slot 38 are assigned to each mobile station. The page indication bits are separated by at least 20 ms separations (col 6 lines 17-28). In order to examine the system parameter, and for reduction of the paging separation the slot cycle period from 1.28 seconds, and to achieve the 20 ms separation, the value of slot cycle index has to be negative. Therefore, setting "-1," "-2," "-3," or "-4" is not a new concept (col 9 lines 35-65).

Regarding claims 8, 16, 26, 34, 44, 52, 62, 70, Heidari inherently teaches a method of claim 7, further including setting a desired slot cycle duration in a SLOT-CYCLE-INDEX field (col 6 lines 35-67, col 7 lines 1-65). Heidari teaches a mobile-station-assigned quick paging channel 36 is also shown in the figure. The quick paging channel (QPCH) 36 assigned to the mobile station is formed of QPCH slots 38. During operation, a particular QPCH slot 38 is also assigned to a mobile station, for the same time period during which a paging channel slot 34 is assigned to the mobile station, again, e.g., during 1.28 second assignation. The QPCH slots 38 are, however, offset from the paging-channel slots 34 by 100 ms offsets. And, two-page indication bits 44 and 46 in the QPCH slot 38 are assigned to each mobile station. The page indication bits are separated by at least 20 ms separations (col 6 lines 17-28). In order to

examine the system parameter, and for reduction of the paging separation the slot cycle period from 1.28 seconds, and to achieve the 20 ms separation, the value of slot cycle index has to be negative. Therefore, setting "-1," "-2," "-3," or "-4" is not a new concept (col 9 lines 35-65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 6, 9-10, 17-18, 24, 27-28, 35-36, 45-46, 53-54, 63-64, 71-72,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari (US patent Number 6,711,413).

Regarding claims 6, 24, 42, 60, Heidari does not specifically mention a method of claim 1, wherein said determining includes examining whether AUTO_MSG_SUPPORTED field is set to "1". However the Examiner takes official notice that designing different field and setting different number is a programmer choice. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of with Heidari, in order to provide reduction of over head and caused by location update and to enable efficient paging.

Regarding claims 7, 15, 25, 33, 43, 51, 61, 69, Heidari does not specifically mention that a method of claim 1, wherein said indicating includes setting WLL_INCL to "1" in

one of registration message, origination message, or page response message. However the Examiner takes official notice that designing different field and setting different number is a programmer choice. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of with Heidari, in order to provide reduction of over head and caused by location update and to enable efficient paging.

Regarding claims 9, 17, 27, 35, 45, 53, 63, 71, Heidari dpes not specifically mention a method of claim 7, further including setting a desired slot cycle duration in a WLL-DEVICE-TYPE field (col 7 lines 1-60). However the Examiner takes official notice that designing different field and setting different number is a programmer choice. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of with Heidari, in order to provide reduction of over head and caused by location update and to enable efficient paging.

Regarding claims 10, 18, 28, 36, 46, 54, 64, 72, Heidari does not specifically mention that a method of claim 1, wherein said indicating includes setting a SLOT-CYCLE-INDEX with a most significant bit of "1" in one of registration message, origination message, or page response message (col 7 lines 1-59). However the Examiner takes official notice that designing different field and setting different number is a programmer choice. Therefore, it would have been obvious to ordinary skill in the art at the time the

invention was made to combine the above teaching of with Heidari, in order to provide reduction of over head and caused by location update and to enable efficient paging.

5. **Claims 4-5, 13-14, 22-23, 31-32, 40-41, 58-59, 68,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari (US patent Number 6,711,413) in view of Zhang et al. (US Publication 2004/0179492 A1).

Regarding claims 4, 13, 22, 31, 40, 50, 58, Heidari fails to teach a method of claim 1, wherein said determining includes examining system parameter messages including extended system parameter messages (ESPM). However, Zhang teaches determining includes examining system parameter messages including extended system parameter messages (ESPM) (0314). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Zhang with Zhang, in order to provide reduction of over head and caused by location update and to enable efficient paging.

Regarding claims 5, 14, 23, 32, 41, 59, 68, Heidari fails to teach a method of claim 1, wherein said determining includes examining system parameter messages including ANSI-41 system parameter messages (A41SPM). However, Zhang a method of claim 1, wherein said determining includes examining system parameter messages including ANSI-41 system parameter messages (A41SPM) (0320). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the

above teaching of Zhang with Zhang, in order to provide reduction of over head and caused by location update and to enable efficient paging. Heidari modified by Zhang does not specifically mention a method of claim 1, wherein said determining includes examining whether AUTO_MSG_SUPPORTED field is set to "1". However the Examiner takes official notice that designing different field and setting different number is a programmer choice. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of with Heidari modified by Zhang, in order to provide reduction of over head and caused by location update and to enable efficient paging.

Response to Arguments

6. Applicant's arguments filed 11/20/06 have been fully considered but they are not persuasive.

In response to the applicant's argument that Heidari fails to teach "*determining whether the BS is capable of short-cycle paging and indicating that the CD is also capable for short slot cycle paging if the BS is determined to be capable of short-slot-cycle paging".*

The Examiner asserts that The modulation employed by F-QPCH allows the mobile to monitor the F-QPCH much more efficiently than it can monitor the paging channel. This allows the mobile to effectively operate at a very **short slot cycle** in a power-efficient manner. One advantage of using the F-QPCH is to provide the mobile with the means to detect and respond to general page messages from the infrastructure,

and hence wakeup request messages from the CM, at a faster slot cycle than would otherwise be allowed at the same battery drain rate. This in turn translates to the ability to minimize one component of the delay that contributes directly to PTT latency and the total dormancy wakeup time--the time required to re-establish listener traffic channels.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e.,QPCH slot 38 is assigned to a mobile, at the same time which a paging channel slot 34 is assigned to the mobile, and during 1.28 second assignation. The PQPCH slots 38 are, however, offset from the paging-channel slots 34 BY 100 MS offsets.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. **Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (571) 272-7905.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

December 8, 2006